EXAMINING THE STOCK INSURANCE IN THE STOCK EXCHANGE "TEHRAN"

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Abstract. This study was done for the purpose of examining the stock insurance in
capital market of Iran. The biggest problem which is existent in the capital market is
the people's lack of confidence toward stockholding. Basic and fundamental measures
and evolutions should be done for the purpose of removing this problem to develop
more this market and obtain stockholders' confidence toward this market. The samples
of this study were selected randomly from the experts of the capital market. Also, the
return of 30 great stocks was compared with a loss coefficient of 16 insurance fields
during the years of 2009 to 2012. The results of this study showed that a design of an
instrument in a stock insurance will attract economic activists' pay attention toward
this instrument and prepare insurance companies with the stock insurance design.

Keywords: Derivative Stocks (subordinate option securities), Insurance, Return, Risk,
Stock Insurance

1 Introduction

Investors are always worried about the ventures of a capital
market. These ventures make the capital markets of the world
introduce the ways of risk management and make institutes and
different tools for the purpose of removing this kind of risk.
Various financial tools of a stock exchange are very effective in
attracting most of the people toward a capital market. This affair
will lead to the stock exchange's growth and stabilization.
Therefore, stock exchange has a stable position in the
economics. This study is on attempt to study the role of
insurance companies as a money supporter. Therefore, the
stockholders' interests will be preserved and a capital market
will be converted to a secure place. One of the major
achievements of world capital markets was to attract people's
pay attention toward a capital market through making a secure
place for people. Economic and non-economic developments
which requires adequate mechanisms for the development of risk
taking will affect the capital market variations. Insurance
companies will ensure people to study the situation of companies
in the stock exchange. Also, they will attract people's trust
toward investing in a capital market through supporting the
companies' stocks.

With the setting up a stock exchange organization in Tehran, the
share holders' rights specially, the stockholders' rights who were
under the danger of systematic risks were preserved.
Measurements such as giving consultants to people were done in
this domain. Most people do not like to invest in a capital market
due to the risks resulting from the variations in stock prices. A
risk of stock price variations will make people not to invest in
the capital market. Therefore, insurance as one part of financial
industry should make a correct mutual relationship with the
capital market. On one hand, an efficient capital market is
needed to develop the insurance activities. On the other hand,
insurance has an important role on the growth of capital market.
To make a stable mutual relationship, a capital market should be
developed and new tools should be made based on the insurance
design of stocks. The most important purpose of this study is to
minimize the risks of stock price variations by insurance
companies. In fact, insurance companies support people against
the loss of some assets such as car, buildings, and stocks. The
amount of money that Insurance companies pay people is related
to the loss of stockholders. Therefore, the stock price should be
calculated if one person insured his or her stock during the last
four years. In this study, the amount of stock loss can be
compared with the amount of firing loss, and other events.

2 Theoretical background

2.1 Stock exchange

It' is one kind of market for transacting financial instruments
which companies and institutes would participate in if all the
necessary conditions were obtained. Therefore, some part of
financial capital can be obtained by insurance companies.

2.2 Insurance Contract

Based on the article 1 of Iran insurance law, insurance contract is
a kind of contract that insurance companies are responsible
against people who insure their assets. Therefore, insurance
companies should compensate or pay people's loss at the time of
occurring an event. The liable companies are insurers and the
people who insure their assets in the insurance companies are
called the insured and the amount of money which will be paid
by people to the insurance companies is called an insurance
premium and a thing which will be insured is called an insurance
subject.

2.3 Risk

Risk is considered as possible negative variations of economic
efficiency in the future.

2.4 Portfolio insurance

Portfolio insurance is one kind of applied method for removing
the risk of investments in stock exchange. This method is good
for investors who like to invest on risky assets and cannot
tolerate its loss. Since an expected interest of these kinds of
assets is high, most people like to invest in these kinds of assets.

2.5 Derivative Securities

In recent years, various financial instruments were designed and
presented to the financial markets. The purpose of designing
these kinds of instruments is to control the investing risk of
portfolio instruments and increase the efficiency of a capital
market. Various securities should be presented with different
risks and returns. Two sample of these kinds of derivative
securities are option contract and future contracts. These kinds of
securities are transacted in large amount in all the world
financial markets.

2.6 Subordinated Option Bonds in the Stock Market of Iran

After the approval of subordinated option bonds in the stock
market, modified instructions were performed by the board of
directors on June 2013 for the stocks of accepted companies in
Tehran stock exchange to support the investors and decrease the
risk of this kind of investment. Subordinated option bonds are
one kind of option contract which a buyer can sell a certain
amount of stocks based on the specified price of announcement.

3 Theoretical framework of the research

Abdo Tabrizi studied the effect of insurance industry on the
global capital markets. With regard to the globalization of an
insurance industry, insurance convergence, and a capital market,
major trends were used in the insurance industry. A researcher
introduced briefly new products which were in relation with a
capital market. In this study, risk transfer, derivative tools, and
their conversions to securities were regarded. Rahmani (2001)
studied the economic role of insurance on the relationship
between a risk transfer and a capital market. Also, he studied the
role of insurance as a risk transfer mechanism, saving tool, and a

capital market developer. A researcher reached to this conclusion that there were financial risks such as inadequate variations in the foreign exchange rates, product prices, and interest rates. Companies can decrease the effect of financial risks through protecting the financial derivatives (Subordinated securities). KadKhodaee (2001) studied the insurance role as an assurance base in all the markets such as a financial market. In financial markets of Iran which money and capital markets are developed a lot, these two markets cannot be expanded without the development of insurance market. A practical strategy is to investigate the role of insurance more accurately in a national market and use the advanced insurance tools. Making specialized insurances in the domain of financial markets such as deposit insurance, stock insurance, debt insurance, and insurance of other financial materials will lead to the development of money and capital markets. Dr. Hoshmand and Tashakori Saleh studied the risk reduction possibility of stock purchasing in a stock market with the insurance contracts on their article which its topic was the role of insurance industry in reducing the risk of investing in the stock market. He gathered the data from the questionnaires he distributed among present stockholders of Mashhad stock exchange. He reached to this conclusion from the statistical analysis that the stockholders were willing to insure their stocks and believed that the interference of an insurance industry in the capital market can increase the amount of investments. Aminian and Asadi (2012) calculated a final insurance rate for each of the examined funds under the study of the mechanisms designed to provide insurance services for the joint investment fund portfolio stock exchange with the traditional pricing methods of insurance contracts and measuring different risks of joint investment funds.

Test results shows that the insurance companies can enter this domain and make themselves and investors reach to a win-win situation. A thing that is discussed in most foreign studies of stock insurance is related to the portfolio insurance. Researchers examined constant proportion portfolio insurance (CPPI) and option based portfolio insurance (OBPI) methods a lot in the studies of stock insurance. Balder, Brandi, and Mahayni (2005) studied the efficiency of CPPI strategies under the time limitation of transactions and understood that if they use CPPI method more, their studies will be more valuable. CPPI and OBPI methods were compared by different researchers. Researchers such as Bratrand and Prignet (2002) compared CPPI and OBPI methods in their study which its name was portfolio insurance strategies.

4 Research questions

1)   Is it possible to design a stock insurance tool in a capital market?
2)   Do economic activists agree with the stock insurance tools?
3)   Can insurance industry perform the plan of stock insurance?

A research methodology is consisted of rules, instruments, valid and systemic methods for the purpose of studying the facts, discovering fabulous things, and reaching a solution. The present study is applied. Applied studies are kind of studies which are done based on the information of fundamental studies and used for satisfying the human necessities. This study was descriptive because it was done based on the theoretical backgrounds and a questionnaire. With the use of past studies, quantitative data of 30 great stock exchange were gathered for measuring the stock return of 2009 to 2012 and extracting the number of insurance majors during the mentioned years. In general, this study is quantitative and descriptive. The statistical population of this study is included of two groups with regard to the research questions.

1)   Statistical population of first and second research questions: All the experts of capital markets such as the managers of the brokerage firms accepted in the stock exchange, the managers of the investment companies accepted in the stock exchange, The managers of the investment companies, the managers of the portfolio companies accepted in the stock exchange, and the investment consultants accepted in the stock exchange. Since accessing to all the experts of a capital market was not possible, the statistical sample of this study was selected from the experts of 107 brokerage firms which were active in the stock exchange and 16 public investment companies accepted in the stock exchange, eight investment companies, five portfolio companies, and nine consulting investment companies. In sum, 145 companies were selected in this study.
2)   Statistical population of the third research question: In this study, 30 great companies of stock market and the performance of insurance industry in 16 things along with their loss coefficients were considered. Therefore, the following criteria were regarded for the purpose of selecting big companies.

In this study, the companies which were only the members of the stock exchange during 2009 to 2012 were considered. Since it is possible to access to the announcements such as the decision of annual general assemblies in relation to the profit division and the decision of extraordinary general assemblies in relation to the investment increase during the mentioned years in www.codal.ir, the stock returns of companies can be calculated. Also, the capital of each of these companies during the mentioned years was at least 200,000 milliard rial. Data was gathered randomly from the mentioned companies for the first and second research questions. Also, the statistical population of the study was calculated for identifying the sample of the third research question.

5 Research method

The sample size of this study was identified with Charles Cockran's formula.

$$n = \frac{N Z_{\frac{a}{2}}^2 p(1-p)}{\varepsilon^2(N-1) + Z_{\frac{a}{2}}^2 p(1-p)} \quad n = \frac{(145 \times (1/96)^2 \times 0/5 \times 0/5)}{144 \times 0/05 \times 0/05 + (1/96)^2 \times 0/5 \times 0/5} = 106 \tag{1}$$

The data were gathered for the first and second research questions through a field method and a questionnaire. Therefore, the questionnaires were distributed among the experts of a capital market. Also, the necessary data for the third research question were gathered from existent information in the codal.ir, seba.ir.

After identifying a validity and reliability of a questionnaire in the frame of a field method, a researcher gathered primary information with that questionnaire which was consisted of 20 questions. Also, in this questionnaire, two dimensions were studied (Table 1).

Table 1. Questionnaire dimensions

Number	Questionnaire Dimensions	The Number of Questions
1	A design of stock insurance tools	11
2	Economic activists' agreement with the stock insurance tools	9

In this study, a researcher used a questionnaire which was consisted of five options to measure the main variables of Likert scale. Also, descriptive and inferential statistics were used in this study for analyzing the data. Therefore, the results of the questionnaire were analyzed with the test validity and reliability, Kolmogorov–Smirnov test, and one sample t-student test.

The validity of the Questionnaire: The validity of the questionnaire was identified by some professors and experts of financial markets. Then, the final modifications were done for the improvement of the questionnaire.

The Reliability of the Questionnaire: In this study, the reliability of the questionnaire was measured with Cronbach's alpha. In the present study, a questionnaire which was consisted of 15 questions was designed. Then the coefficient of Cronbach's alpha was obtained for the two dimensions of the questionnaire. The coefficient amount of Cronbach's alpha was identified 0.768 for the design of the stock insurance tool and 0.786 for the economic activists' agreement of stock insurance tools. Also, the coefficient amount of Cronbach's alpha was calculated 0.809. Therefore, all the coefficient amounts of Cronbach's alpha were suitable and acceptable. Next, the reliability of the questionnaire was confirmed. Finally, the statistical data of the study which were gathered with SPSS 21 and Excel 2010 were processed.

The Sample of the Study: In the present study, a questionnaire which was consisted of questions about the individual features of the participants was designed. Therefore, the individual features of the participants are as follows:

1)   Participants' age: Most participants (%48) were 20 to 29 years old. Also, 43 percent of participants were 30 to 39 years old. Nine percent of participants were 40 and more than 40 years old.
2)   Educational Level of Participants: 66 percent of participants had a master of art and 14 percent of participants had PHD and more than PHD. Also, 20 percent of participants had bachelor of art.
3)   Participants' experience in the capital market: 59 percent of participants worked in the capital market between 1 to 10 years. Also, 39 percent of participants worked in the capital market of Iran between 10 to 19 years. Only two percent of participants worked in the capital market more than 20 years.

Normality Test: In this study, a Kolmogorov–Smirnov test was used for normalization of variables such as the design of a stock insurance tool and the economic activists' agreement of stock insurance tools. The results of this test are shown in the table 2.

Table 2. Kolmogorov–Smirnov test results

A Kolmogorov–Smirnov test	The Amount of the Test	Freedom Degree	P-value
A design of stock insurance tools	0.079	106	0.105
Economic activists' agreement with the stock insurance tools	0.085	106	0.060

As it is observed from the above table, p-value is more than 0.05. Therefore, the variables such as the design of the stock insurance tools and economic activists' agreement with the stock insurance tools are normal.

The results of one sample t-test for the first research question show that p-value is less than 0.05 and is equal to 0.001. Also, a mean of stock insurance tool designs is 3.1. Therefore, a zero assumption will be rejected in the significant level of 0.05 and will be stated with 95 percent that it is possible to design stock insurance tools in the capital market. Also, the results of one sample t-test for the second research question show that the amount of economic activists' agreement with the stock insurance tools is about 3.8. In the above test, p-value is less than 0.05. Also, a zero assumption in the significant level of five percent will be rejected. Therefore, it can be stated with a confidence level of 95 percent that economic activist agrees with the stock insurance tools. The third research question results showed that the mean of the stock return was 0.548 based on the information of total return of 30 great stocks of stock exchange during the years of 2009 to 2012. Then, the results of this study were compared with the loss coefficient of 16 insurance fields. The test results showed that p-value is more than 0.05 for insurance fields such as engineering, responsibility, credit, Life span, automobile, and other kinds of insurance.

It means that there is not a significant difference between the mean of the total return of stocks and the mean of the loss coefficients of some insurance fields at the error level of 0.05. In other words, a mean of the total return of stocks is approximately equal to the mean of loss coefficient of some insurance fields such as engineering, responsibility, credit, life span, automobile, and other kinds of insurance. P-value is less than 0.05 for some insurance fields such as events, airplane, firing, transportation, money, petroleum, energy, and driving events. Also, the mean of coefficient loss of these kinds of fields is smaller than the mean of the total return of stocks which is 0.548. In other words, a mean of a total return of stocks is bigger than the coefficient loss of some insurance fields such as events, airplane, firing, transportation, money, petroleum, energy, and driving events. Therefore, it can be observed from the comparison of this study and 16 insurance fields that the mean of the total return of the stocks is bigger or equal to the loss coefficient of 13 insurance fields. Therefore, it can be answered to the third research question with a confidence level of 95 percent.

Table 3. Results of t-test

Number	The Insurance Fields	The Coefficient Loss	The Amount of Insurance	The Degree of Freedom	P-Value
1	Firing	0.31	2.604	119	0.010
2	Transportation	0.29	2.822	119	0.006
3	Events	0.33	2.385	119	0.019
4	Treatment	1.13	-6.364	119	0.000
5	Ship	1.12	-6.255	119	0.000

6	Airplane	0.35	2.166	119	0.032
7	Engineering	0.46	0.936	119	0.337
8	Money	0.21	3.697	119	0.000
9	Responsibility	0.53	0.198	119	0.844
10	Credit	0.44	1.182	119	0.240
11	Petroleum and Energy	0.17	4.135	119	0.000
12	Life Span	0.66	-1.224	119	0.223
13	Third Party Insurance	0.90	-3.849	119	0.000
14	Driving Events	0.31	2.604	119	0.010
15	Automobile	0.66	-1.224	119	0.223
16	Other Kinds of Insurance	0.45	1.072	119	0.286
		Mean		Standard Deviation	
The Total Returns of Stocks		0.548		1.002	

5.1 The Overall Results of the Study

This study shows that a risk of purchasing stocks through the insurance process of stocks can be controlled. In this study, one questionnaire was presented for the possibility of designing the insurance tools of the stocks and economic activists' agreement with insurance tools of stocks. Also, the stock returns of selected companies during the years of 2009 to 2012 were compared with the performance of 16 insurance fields for the purpose of measuring the readiness of insurance industry.

Therefore, the present study showed that it was possible to control the risk of purchasing stocks through the insurance process of stocks with the confirmation of research questions.

6 Conclusion

With regard to the results of this study, it is suggested that insurance companies do something for the stock insurance and consider it as a suitable opportunity for the development of insurance activities. Also, if insurance companies like to invest in the stock market, they will study the situation of accepted companies in the stock exchange for the purpose of controlling their risk of investment. Therefore, they should insure first the big firms of the capital market which are of the longer experiences and better management. These insurance companies should introduce these big companies to investors with insuring their stocks in order to make people's trust toward investing in the capital market. It is suggested that a central insurance of Iran and the private insurance firms study the stocks of big firms for the purpose of insuring them. Therefore, a scientific instruction should be codified and given to the board of assembly and association. It is suggested that the future researchers should study on the portfolio insurance without considering the sanctions and the political and economic situations of the country and consider many things for calculating the return of stocks. Therefore, insurance firms should do something toward identifying the fair insurance rate of stocks. It should be mentioned that future researchers should study the technical and structural dimension of portfolio insurance in the stock exchange.

From the structural and technical points of view, export forces, software, clearing house, transaction and ownership transfer are respectively necessary for the management of transactions, showing the transactions, recording, and designing and applying new financial tools.

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